



United States
Environmental Protection
Agency

Region 5
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U.S. EPA Proposes Cleanup Plan South Green Avenue Site

(Formerly MichCon Station H)

Detroit, Michigan

March 2001

Opportunities for Public Involvement

Public Comment Period

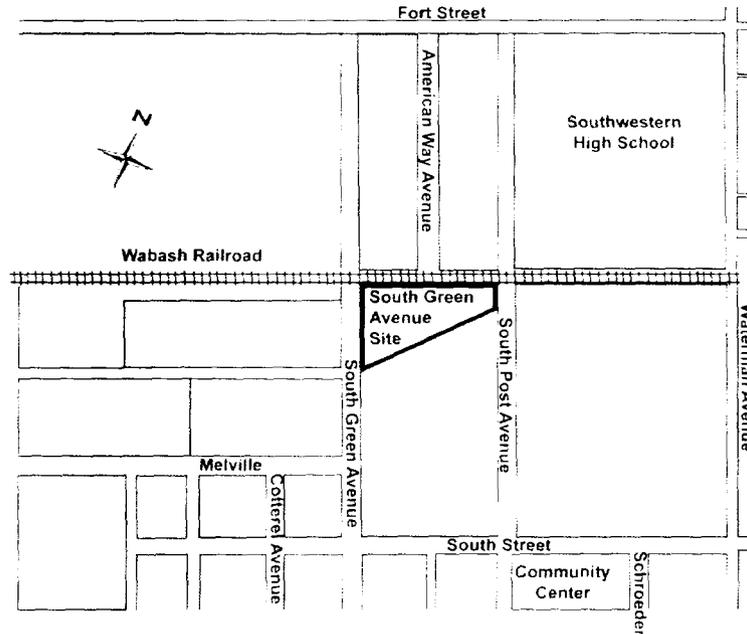
U.S. EPA will accept written comments on the recommended alternative presented in this proposed plan as well as the EE/CA for the South Green Avenue Site during a 30-day comment period from March 14 to April 12, 2001. A copy of the EE/CA and other site documents are available for review at:

Detroit Public Library
Sociology and Economics
Department
5201 Woodward Avenue
Detroit, Michigan

Public Meeting

Requests for a public meeting on the EE/CA may be directed to Cheryl Allen, Community Involvement Coordinator at (312) 353-6196, or toll-free at (800) 621-8431, ext. 36196.

Site Map



Introduction

The United States Environmental Protection Agency (U.S. EPA) has approved a study called an Engineering Evaluation/Cost Analysis (EE/CA) for the South Green Avenue Site (Site). The Site, formerly known as MichCon Station H, is located at 201 South Green Avenue, Detroit, Wayne County, Michigan. The EE/CA was conducted by the Michigan Consolidated Gas Company (MichCon), a **potentially responsible party (PRP)**¹, under U.S. EPA supervision. The EE/CA consisted of gathering data obtained through sampling, performing a risk assessment, and comparing cleanup options. This proposed plan summarizes information that can be found in greater detail in the EE/CA Report and other documents contained in the information repository (see back page for the location of the information repository).

This document describes U.S. EPA's recommended cleanup alternative for the Site as well as the other cleanup alternatives that were considered. U.S. EPA is issuing this proposed plan as part of its public participation responsibilities under section 117 [a] of the **Superfund law called Comprehensive Environmental Response, Compensation, and Liability Act**². Based on new information, or public comment, U.S. EPA may modify the recommended cleanup alternative or select another alternative presented in this plan.

¹ Words appearing in **bold type** are defined in a glossary on page 7.

² Section 300.415 (b) (4) (i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and section 113 (k) (2) of the Comprehensive Environmental Response, Compensation, and Liability Act, require publication of a notice describing U.S. EPA's recommended alternative. The EE/CA must also be made available to the public for comment. This proposed plan is a summary of information contained in the EE/CA for the South Green Avenue Site. Please consult the EE/CA for more detailed information.

Site Background

The Site consists of three properties located in a mixed industrial/residential area, in southwest Detroit. It is bordered to the northwest by the Chesapeake and Ohio Railroad tracks. Post Street borders the Site to the northeast and South Green Avenue borders the Site to the southwest. The nearest residents live approximately 400 feet southeast. Southwestern High School is located to the north, at 6921 West Fort.

In 1904, Detroit Suburban Gas Company operated a manufactured gas plant (MGP) at the Site. The MGP was referred to as Station H and was used until approximately 1945. In 1913, the site was operated by Detroit City Gas Company, which acquired the assets of the Detroit Suburban Gas Company. Detroit City Gas Company was later acquired by MichCon. From 1946 to 1976, AMCOL (formerly American Charcoal Company) owned the Site. In 1976, the Site was sold to A & A Scrap Metal & Iron. A & A ownership of the Site continued until 1995, when the State of Michigan took possession because of unpaid property taxes. In 1997, the City of Detroit acquired the Site for potential redevelopment under the **Brownfields** program. The site is now vacant and is approximately 2.2 acres in size. MichCon still owns two small parcels at the western corner of the site used to access an underground gas pipeline.

The MGP was used to produce a gas-phase final product for customers to heat homes and for cooking. One of the by-products of the MGP was a tar-like substance that was stored in underground structures. Some of these tar-like substances, as well as soil and debris contaminated with these substances and/or contaminated during the general operation of the facility, remain at the Site and will be addressed by the cleanup.

Site Investigations

In 1997, 37 drums and barrels were present on the South Green Avenue Site. The drums contained a wide variety of materials, including: oils, resins, paint sludge, petroleum distillates and phosphoric acid. Some of the drums were leaking. Partially buried drums and vehicle gasoline tanks; piles of asphalt shingles, containers of driveway and roofing asphalt compounds; abandoned vehicles; and at least 200 tires were also present on Site. The 37 drums were removed from the Site by Michigan Department of Environmental Quality in November 1997.

In February 1998, U.S. EPA performed an assessment at the Site. Five capacitors were located outside of the Site boundaries under a high voltage power line tower near Post

Street. Laboratory analysis of a sample collected from a capacitor revealed **polychlorinated biphenyls (PCBs)** in high concentrations. A soil sample collected from underneath the capacitor contained PCBs at similar concentrations, indicating that the PCBs had leaked into the surrounding soil.

U.S. EPA removed the PCB wastes in the Summer of 1998. Approximately 2,300 tons of PCB-contaminated soil were excavated and properly disposed of off-site.

After the removal of PCB-contaminated soil, U.S. EPA issued an **Administrative Order by Consent (AOC)** to MichCon. The AOC became effective on August 4, 1998. It directed MichCon to perform the EE/CA in order to evaluate the need for additional cleanup activities at the Site.

Summary of Risks

A Baseline Risk Assessment was performed as part of the EE/CA for the Site. The risk assessment evaluated three potential groups of people who may come into contact with contamination at the Site. Four potential exposure scenarios were evaluated for those groups associated with *current* site conditions. They were:

- direct contact with site surface soil by on-site industrial workers;
- direct contact with site subsurface soil by on-site construction workers;
- direct contact with site ground water by on-site construction workers;
- direct contact with site surface soils by adolescent on-site trespassers.

Explanation of Risks

U.S. EPA expresses the likelihood of any kind of cancer resulting from a Superfund site as probability. For example, if the risk is 1×10^{-4} , there would be a "1 in 10,000 chance" of a site-related cancer case. In other words, for every 10,000 people exposed to the contaminants of concern, one additional cancer case may occur as a result of exposure to those contaminants. An extra cancer case means that one more person could get cancer than would normally be expected to from all other causes. U.S. EPA established a cancer risk range (1×10^{-4} to 1×10^{-6} , or "1 in 10,000 chance" to "1 in a 1,000,000 chance") in an attempt to set standards for cleanup and human health protection. In general, U.S. EPA considers a cancer risk increase beyond one chance in 10,000, unacceptable. The risks for the four exposure scenarios evaluated for this site are listed in the table on page 3.

Exposure Scenarios	Cancer Risk
Exposure to surface soil on site by an industrial worker	7×10^{-5}
Exposure to subsurface soil on site by a construction worker	7.9×10^{-5}
Exposure to ground water on site by a construction worker	6.2×10^{-8}
Exposure to surface soil by adolescent trespasser	1.7×10^{-5}

Some non-cancer causing chemicals, called noncarcinogens, may have other health effects, such as: organ damage, immunological effects, or skin irritation. U.S. EPA defines acceptable noncancer exposure as those exposures that would have no adverse health effects over a specified time period (e.g., a lifetime). This acceptable exposure level is approximately represented by what is referred to as a hazard index (HI) of 1.0. For the four exposure scenarios evaluated at the Site, the noncancer hazard estimates were all below a HI of 1.0.

J.S. EPA's Recommended Cleanup Plan

As described above, the EE/CA (both the field work and the report development) were completed by MichCon. U.S. EPA technical staff monitored MichCon's field work and the development of the EE/CA Report. Then, U.S. EPA technical and legal staff evaluated the alternatives presented in the EE/CA Report prepared by MichCon.

Based on its evaluation of the alternatives, U.S. EPA is recommending **Alternative 5, Excavation and Off-Site Disposal**, to address contamination at the South Green Avenue Site. U.S. EPA believes that the recommended cleanup plan represents the best balance of the evaluated criteria — effectiveness, implementability, and cost. After the cleanup is complete, U.S. EPA will require confirmation sampling to assure the cleanup's effectiveness.

Summary of Cleanup Alternatives

U.S. EPA evaluated the following alternatives to address contamination at the South Green Avenue Site:

Alternative 1: Containment and Site Restrictions

This alternative has four main components: 1) placing 6-inches of compacted soil cover over the former underground structures in the south portion of the Site; 2) restricting future on-site construction and excavation activities; 3) performing yearly inspections to verify that the soil cover is maintained; and 4) instituting a two-year groundwater monitoring program.

Estimated Cost: \$202,540

Alternative 2: Excavation/On-Site Thermal Desorption

This alternative involves using an excavator to remove soil and materials from underground storage vessels.

Concrete, pipe, and other debris will be removed as needed. The concrete, pipe and other debris will then be transported to an off-site disposal facility. The concrete foundations of the two underground structures were inspected and in good condition; their removal would not be required.

The soil will then be treated with thermal desorption. Thermal desorption works by heating the contaminated material to high temperatures which causes the contaminants to evaporate. As the contaminants evaporate, they are either trapped on a filter or treated in another manner. The soil may also require pretreatment prior to being placed in the thermal desorption unit to meet its mechanical requirements. After the soil is treated, it would be staged in piles until sample results from laboratory analysis confirms it has met the appropriate cleanup criteria. If the soil meets the cleanup criteria, it will be placed back into the excavation pit as backfill. Imported backfill will also be required to fill in the pit to the previous grade.

Estimated Cost: \$2,324,271 - \$3,205,496

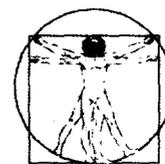
Alternative 3: Excavation/On-Site Incineration

This cleanup alternative uses the same excavation activities described for *Alternative 2*. However, in this alternative, the soil will then be treated through incineration. After pretreatment, the soil is fed into a combustion chamber and burned. The burning creates an ash by-product that may contain concentrated heavy metals. It would require analysis to ensure that **leachable** metals do not exceed toxicity levels. If toxicity levels are not exceeded, the ash can be used to backfill the excavation.

EVALUATION OF ALTERNATIVES

U.S. EPA used three criteria to compare the cleanup alternatives, and to recommend a practical cleanup plan for the contamination at the Site. The degree to which the alternatives meet the evaluation criteria, as determined by U.S. EPA, is shown in the table entitled "Comparison of Alternatives Against the Evaluation Criteria" on page 4. The criteria used to evaluate the cleanup alternatives were:

Effectiveness - The ability of a cleanup alternative to meet the objectives within the scope of the removal action, especially with regard to the protection of public health and the environment.



Implementability - The technical and administrative feasibility of implementing the cleanup alternative, such as the availability of goods and services.

Cost - The estimated capital, operation, maintenance costs, and present worth cost of an alternative. Present worth costs are the alternative's total cost over time, but in terms of today's dollars.



The incineration process would require an air pollution control system. Such a system produces a wastewater by-product that will require additional treatment and/or disposal.

Estimated Cost: \$4,906,551 to \$6,450,464

Alternative 4: Excavation/Thermal Treatment at a Power Plant

This cleanup alternative uses the same excavation activities described for *Alternative 2*. However with this alternative, the soil will be treated through a process known as “co-burning.” This involves feeding small amounts of contaminated soil into a boiler at a power plant. In the boiler, the soil is incinerated inside the furnace at high temperatures. The applicability of this technology depends on the ability to process the soil, incorporate the soil into the boiler, and to burn the material without adversely affecting the boiler operation or the quality of the off-gas and ash. Treatment of contaminated soil in a power plant is an established technology.

Estimated Cost: \$3,465,402 to \$5,483,555

Alternative 5: Excavation/Off-Site Disposal

In this alternative, the contaminated soil, concrete, pipe, and other debris will be excavated, loaded into trucks and transported to a landfill for disposal as a non-hazardous waste. A potential disposal facility has been identified as Carleton Farms, Inc. landfill, in New Boston, Michigan. The excavated area would then be filled with imported backfill materials according to standard construction practices.

Estimated Cost: \$919,626 to \$1,354,456

The Next Step

U.S. EPA will accept and consider all comments received at the public meeting and during the 30-day comment period from **March 14, 2001, through April 12, 2001**, before developing a final site cleanup plan. Comments received during the comment period will be addressed in a document called a Responsiveness Summary. The cleanup plan will be described in a final decision document (called an Enforcement Action Memorandum) that, along with the Responsiveness Summary, will be made available to the public in the information repository.

Comparison of Alternatives Against the Evaluation Criteria

Criteria	Alternative 1 Containment and Site Restrictions	Alternative 2 Excavation with On-Site Thermal Desorption	Alternative 3 Excavation with On-Site Incineration	Alternative 4 Excavation with Off-Site Thermal Treatment at Power Plant	Alternative 5 Excavation with Off-Site Disposal (U.S. EPA's Recommended Alternative)
Effectiveness	Although implementing the site restrictions will prevent potential exposure to site contaminants, the contaminants still remain on site. This alternative is the least protective of human health and the environment.	Treatment of the contaminants would reduce future exposure to contaminants. Potential short-term risks during implementation.	Treatment of the contaminants would reduce future exposure to contaminants. Potential short-term risks during implementation.	Treatment of the contaminants would reduce future exposure to contaminants. Potential short-term risks during implementation.	Removal of the contaminants would reduce future exposure to contaminants. Potential short-term risks during implementation, although with this alternative the short-term risks would be significantly less than with alternatives 2, 3, and 4.
Implementability	Easy to implement. Requires no special equipment or services.	Implementable. Specialized coordination and equipment would be required. Implementation of this alternative could cause a delay due to the long lead-time required to get the special equipment.	Most difficult to implement (most complicated system). Specialized coordination and equipment would be required. Implementation of this alternative could cause a delay due to the long lead-time required to get the special equipment.	Implementable. However the transportation distance to a treatment plant would be considerably greater than to a disposal facility as in alternative 5. In addition, this alternative would require scheduling time with the treatment plant which could potentially delay the implementation.	Implementable. Requires less transportation time and distance than in alternative 4. Requires no specialized equipment or services.
Cost	\$202,540	\$2.3 - \$3.2 million	\$4.9 - \$6.4 million	\$3.4 - \$5.4 million	\$919,626 - \$1.3 million

**South Green Avenue Site
Public Comment Sheet**

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Address _____

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Ms. Cheryl Allen
Community Involvement Coordinator
Office of Public Affairs (P-19J)
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Glossary

Administrative Order by Consent (AOC) - A legal agreement signed by U.S. EPA and an individual, business, or other entity through which the violator agrees to pay for correction of violations, take the required corrective or cleanup actions, or refrain from an activity. The AOC describes the actions to be taken, may be subject to a comment period, applies to civil actions, and is enforceable in court. A copy of the AOC is available for review at the information repository.

Brownfields - Abandoned, idled, or under used industrial and commercial properties where expansion or redevelopment is complicated by real or perceived environmental contamination. They can be urban, suburban or rural areas. Brownfields initiatives help communities mitigate potential health risks and help restore the economic viability.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - The federal law passed in 1980 to protect human health and the environment. CERCLA provides enforcement powers based on the belief that polluters should take responsibility for cleaning up their own wastes. CERCLA authorizes the federal government to respond directly to releases of hazardous substances that may endanger human health or the environment. U.S. EPA is responsible for implementing CERCLA.

Leachable - The tendency of soluble elements to dissolve and filter through soil and sediment as water trickles through waste and contamination. The more leachable something is, the greater the potential for it to migrate and spread.

Polychlorinated Biphenyls (PCBs) - a family of man-made compounds. PCBs are extremely persistent in the environment; they do not break down into less harmful chemicals over long periods of time. PCBs may enter the food chain and be consumed by humans. When animals are exposed to PCBs, the PCBs become stored in their fatty tissues, where they accumulate because they are not excreted with normal body wastes. Humans are primarily exposed to PCBs through accumulation in the food chain. PCBs have no smell or taste and exist as either oily liquids or solids. Health effects that may result from exposure to PCBs include skin irritation and irritation to the nose and lungs. Long-term exposure to PCBs can cause liver damage and has been shown to cause cancer in laboratory animals.

Potentially Responsible Party (PRP) - any individual or company – including owners, operators, transporters or generators – potentially responsible for, or contributing to, a spill or other contamination at a site. Whenever possible, through administrative and legal actions, U.S. EPA requires PRPs to clean up hazardous sites they have contaminated.

Superfund - The common name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The term Superfund refers to a \$1.6 billion Hazardous Substance Response Trust Fund established to pay for cleanup and enforcement activities at waste sites. The fund is financed primarily with taxes on crude oil and many commercially used chemicals. In 1986, the Superfund Amendments and Reauthorization Act of 1986 (SARA) was enacted. Among other things, SARA increased the size of the Trust Fund from \$1.6 billion to \$8.5 billion.

Mailing List

If you did not receive this fact sheet by mail, you are not on U.S. EPA's mailing list for the South Green Avenue Site. If you wish to receive future information concerning this Site, please fill out the form below, detach and mail to:

Ms. Cheryl Allen
Community Involvement Coordinator
Office of Public Affairs (P-19J)
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Name _____

Affiliation _____

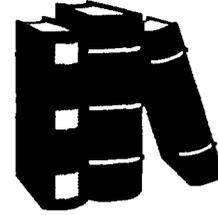
Address _____

City _____ State _____ Zip _____

For More Information

The EE/CA Report and other documents relating to the South Green Avenue Site are available for review in the local information repository, listed below:

Detroit Public Library
Sociology and Economics Department
5201 Woodward Avenue
Detroit, Michigan



For additional information about this Site, you may contact the following representatives:

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